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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,645	05/01/2001	Charles L. Asbury	UW - Asbury	6607

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EXAMINER

VANORE, DAVID A

ART UNIT	PAPER NUMBER
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2881

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/847,645

Applicant(s)

ASBURY ET AL.

Examiner

David A Vanore

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed January 23, 2004 have been fully considered but they are not persuasive.

Applicant argues that Howie et al. and Batchelder et al. fail to teach or suggest detection of radiation independent of any anisotropic effect or a motivation to do so. This argument is not persuasive because the detection of radiation at an angle of 54.7 degrees from the direction of polarization, the "magic angle", is known in the art. The selective detection of radiation at an angle of 54.7 degrees from the angle of polarization would require one to reorient a detector relative to a flow chamber and radiation source as described in the outstanding rejection. The removal of anisotropic radiation from radiation detected at an angle of 54.7 degree relative to the angle of polarization is an artifact of the detection angle. It is known in the art that anisotropic radiation is not detected when a sensor is placed at an angle of 54.7 degrees from the angle of polarization as shown in the Katrin Ekvall reference "Time Resolved Laser Spectroscopy" at pages 8 and 40-41. Therefore, since the removal of the anisotropic radiation occurs as a consequence of the laws of nature, not as a consequence of the selective placement of a detector in relation to a source of radiation, no new and unexpected result occurs by placing a detector selectively at a desired angle relative to a radiation source. The claims stand finally rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 6, 10, 11, 12, 13, and 18 stand rejected and claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howie et al.

Howie et al. teaches a device for sample analysis comprising a polarized radiation source (2), a flow chamber (15), and a plurality of signal detectors (4, 17) arranged at a desired angle around the flow chamber (Note Fig. 3) as recited in claims 1, 6, 11, 12, and 13.

Given that Howie et al. teaches the placement of detectors to "surround the cell" (Col. 6 Lines 29-65), the detection apparatus of Howie et al. teaches that detectors may be placed at any orientation to the polarized radiation source and flow chamber including at 54.7 degrees from the direction of polarization or 35.3 degrees from the direction of polarization as recited in claims 5, 10, 11, 12, and 18.

It would have been obvious to one having ordinary skill in the art to select the optimum value of the position of the detectors because one of ordinary skill in the art would select the position of the detectors for the analysis of a desired scattered radiation.

Claims 2-4, 7-9, and 14-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Howie et al. in view of Batchelder et al.

Howie et al. teaches all limitations as applied above, but does not teach the rearranging of the detector, flow cell, and light source such that the sample flow is

orthogonal to a detector or radiation source, and that is parallel to a direction of polarization of the incident radiation.

Batchelder et al. teaches a flow cytometer comprising a polarized radiation source (10), a flow capillary (28), and detectors (52 and 54) where the direction of polarization is selectable to include being parallel to the flow trajectory, and the sample stream is orthogonal to the radiation source and detection means.

Batchelder et al. modifies the device of Howie et al. to produce a flow cytometer with selectable polarization states of incident radiation and a plurality of detection means to receive scattered radiation at a selected angle where the flow cell, radiation source and detection means are arranged as described above.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Howie et al. with the device of Batchelder et al. because one of ordinary skill would have arranged the components of Howie et al. to achieve the optimum detection conditions. One of ordinary skill in the art would have known to select the polarization state relative to the direction of sample flow and arranged the detectors accordingly because Batchelder teaches this arrangement.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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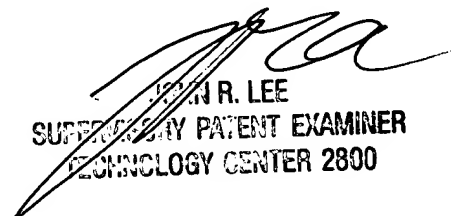
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Vanore whose telephone number is (571) 272-2483. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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